



Attorney Docket No. 51995 (ACT-214)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Dan A. STEINBERG

U.S.S.N.: 10/067,218

Art Unit: 2874

FILED: February 7, 2002

Examiner: Ellen E. Kim

FOR: V-GROOVE WITH TAPERED DEPTH AND METHOD FOR MAKING

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on -

1/22/04

By Deanna M. Rivernider  
Deanna M. Rivernider

**SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

**I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION**

The patents, publications or other information submitted for consideration by the Examiner are listed on the PTO-1449 form, attached hereto.

In addition to the aforesaid references, Applicants wish to bring to the attention of the Examiner co-pending U.S. Applications indicated below:

U.S. Patent Application Serial No. 10/071,261, filed February 7, 2002  
U.S. Patent Application Serial No. 10/076,858, filed February 14, 2002  
U.S. Patent Application Serial No. 10/124,612, filed April 17, 2002  
U.S. Patent Application Serial No. 10/199,476, filed July 19, 2002

All of the above-referenced applications are assigned to the Assignee of the subject application. The corresponding published applications are included on the PTO-1449 form and a copy of each of the applications is attached hereto.

**II. COPIES**

Submitted herewith is a legible copy of (i) each U.S. and foreign patent or English abstract of foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.

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**III. CONCISE EXPLANATION OF THE RELEVANCE**

All of the patents, publications or other information are in the English language, were cited in an English language Search Report or include an English language abstract, a copy of which is attached hereto (concise explanation not required).

**FEES**

**IV. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b)**

(check one box)

- a. ☐ within three months of the filing date of a national application (37 C.F.R. § 1.97(b) (1)). No fee or certification is required.
- b. ☐ within three months of the date of entry of the national stage as set forth in §1.491 in an international application (37 C.F.R. § 1.97(b) (2)). No fee or certification is required.
- c. ☐ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b) (3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below, or, if no certification has been made, charge our deposit account a fee in the amount of \$240.00 as required by 37 C.F.R. § 1.17(p).

**V. THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):**

(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c) (1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c) (2)).

- a. ☒ No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
- or
- b. ☐ See the certification below. No fee is required.

**VI. CERTIFICATION UNDER 37 C.F.R. § 1.97(e) (check only one box)**


The undersigned hereby certifies that

- a. ☐ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS;  
or

- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.
- c. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned certifies that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.
- ☒ Enclosed please find a check in the amount of \$ 180.00 for the above indicated fee.
- ☐ Please charge Deposit Account No. 04-1105 in the amount of \$180.00 for the above-indicated fee. A triplicate copy of this paper is attached.
- ☐ No fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition, if necessary) and charge the appropriate fee to Deposit Account No. 04-1105.

Respectfully submitted,

  
Jonathan D. Baskin (Reg. No. 39,499)  
EDWARDS & ANGELL, LLP  
P.O. Box 9169  
Boston, MA 02209  
(508) 787-4766



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**LIST OF ART CITED BY APPLICANT**

(Use several sheets if necessary)

Atty Docket No. <b>ACT-214</b>	Serial No. <b>10/067,218</b>
Applicant <b>Dan A. STEINBERG</b>	
Filing Date <b>February 7, 2002</b>	Group <b>2874</b>

**U.S. Patent Documents**

EXAMINER INITIALS		DOCUMENT NUMBER	DATE	NAME	Class/Subclass	FILING DATE IF APPROPRIATE
	AA	4,225,213	09/30/1980	McBride, Jr. et al.		
	AB	4,253,735	03/03/1981	Kawamura et al.		
	AC	4,362,367	12/07/1982	Hammer et al.		
	AD	4,411,057	10/25/1983	Duda et al.		
	AE	4,812,002	03/14/1989	Kato et al.		
	AF	4,830,450	05/16/1989	Connell et al.		
	AG	4,863,560	09/05/1989	Hawkins		
	AH	4,938,841	07/03/1990	Shahar et al.		
	AI	4,957,592	09/18/1990	O'Neill		
	AJ	5,024,500	06/18/1991	Stanley et al.		
	AK	5,095,386	03/10/1992	Scheibengraber		

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	Class/Subclass	Translation Yes/No
	AL					
	AM					
	AN					
	AO					
	AP					

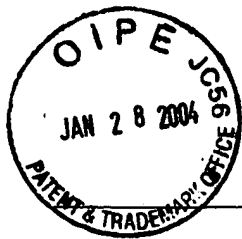
**OTHER ART (Including Author, Title, Date, Pertinent Patents, etc.)**

	AQ	Fundamentals of Microfabrication; Marc Madou; CRC Press; 1997, 174-178
	AR	J. Brugger et al.; Self-aligned 3D shadow mask technique for patterning deeply recessed surfaces of micro-electro-mechanical systems devices; Sensors and Actuators 76; 1999; 329-334
	AS	J.D. Fleming; Combining the best of bulk and surface micromachining using Si {111} substrates; SPIE Vol. 3511, September 1998; 162-168

Examiner

Date Considered

\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.



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**LIST OF ART CITED BY APPLICANT**

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**U.S. Patent Documents**

EXAMINER INITIALS		DOCUMENT NUMBER	DATE	NAME	Class/Subclass	FILING DATE IF APPROPRIATE
	AT	5,135,590	08/04/1992	Basavanhally et al.		
	AU	5,281,301	01/25/1994	Basavanhally		
	AV	5,338,400	08/16/1994	Jerman		
	AW	5,357,593	10/18/1994	Boassler		
	AX	5,381,231	01/10/1995	Tu		
	AY	5,844,723	10/01/1998	Snyder		
	AZ	5,896,481	04/20/1999	Beranek et al.		
	BA	5,911,021	06/08/1999	MacDonald et al.		
	BB	6,023,546	02/08/2000	Tachigori		
	BC	6,088,168	07/11/2000	Snyder		
	BD	6,187,515	02/13/2001	Tran et al.		

**FOREIGN PATENT DOCUMENTS**

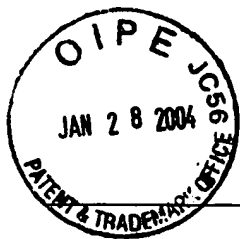
		DOCUMENT NUMBER	DATE	COUNTRY	Class/Subclass	Translation Yes/No
	BE					
	BF					
	BG					
	BHI					
	BI					

**OTHER ART (Including Author, Title, Date, Pertinent Patents, etc.)**

	BJ	Etching of silicon in alkaline solutions: a critical look at the {111} minimum; A. Jasper Nijdam et al.; MESA Research Institute for Micro Electronics, Materials Engineering, Sensors & Actuators
	BK	New design methodologies in <111> oriented silicon wafers; R.E. Oosterbroek et al.; MESA Research Institute for Micro Electronics, Materials Engineering, Sensors & Actuators
	BL	Simulation of Anisotropic Wet-Chemical Etching Using a Physical Model; J. van Suchtelen et al.; MESA Research Institute for Micro Electronics, Materials Engineering, Sensors & Actuators

Examiner	Date Considered
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**U.S. Patent Documents**

EXAMINER INITIALS		DOCUMENT NUMBER	DATE	NAME	Class/Subclass	FILING DATE IF APPROPRIATE
	BM	2002/0195417	12/26/2002	Steinberg		
	BN	2003/0020130	01/30/2003	Steinberg et al.		
	BO	2003/0034438	02/20/2003	Sherrer et al.		
	BP	2003/0059622	03/27/2003	Steinberg et al.		
	BQ	2003/0067049	04/10/2003	Steinberg et al.		
	BR	4,706,061	11/11/1987	Johnson		
	BS	4,784,721	11/15/1988	Holmen et al.		
	BT	4,837,129	06/06/1989	Frisch et al.		
	BU	4,945,400	07/31/1990	Blonder et al.		
	BV	5,384,872	01/24/1995	Jacobs-Cook et al.		
	BW	5,507,911	04/16/1996	Greiff		

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	Class/Subclass	Translation Yes/No
	BX					
	BY					
	BZ					
	CA					
	CB					

**OTHER ART (Including Author, Title, Date, Pertinent Patents, etc.)**

	CC	
	CD	
	CE	

Examiner

Date Considered

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